

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1-44. (Cancelled)

45. (Previously presented) A method for the production of starch and/or oil, comprising growing a transformed plant that expresses at least one hemoglobin and recovering the starch and/or oil from said transformed plant.

46. (Cancelled)

47. (Currently amended) The method of claim 45, wherein the hemoglobin is derived from a plant selected from the group consisting of *Lupinus luteus*, *Glycine max*, *Medicago sativa*, *Medicago trunculata*, *Phaseolus vulgaris*, *Vicia faba*, *Pisum sativum*, *Vigna unguiculata*, *Lotus japonicus*, *Psophocarpus tetragonolobus*, *Sesbania rostrata*, *Casuarina glauca*, *Canvalaria lineata*, *Physcomitrella patens*, *Arabidopsis thaliana*, *Gossypium hirsutum*, *Oryza sativa*, *Brassica napus*, *Lycopersicon esculentum*, *Hordeum vulgare*, *Zea mays*, *Trema tomentosa*, and *Parasponia rigida*.

48. (Currently amended) The method of claim 45, wherein the hemoglobin is derived from *Arabidopsis thaliana*.

49. (Previously presented) The method of claim 45, wherein the hemoglobin is expressed in a storage-organ-specific manner.

50. (Previously presented) The method of claim 45, wherein the hemoglobin is expressed in a tuber-specific, seed-specific, or tuber- and seed-specific manner.

51. (Currently amended) The method of claim 45, wherein the hemoglobin is encoded by a nucleotide sequence having at least 90% 95% identity with the nucleotide sequence as set forth in SEQ ID NO: 5 and the transformed plant produces an increased amount of storage reserves.

52. (Previously presented) The method of claim 45, wherein the hemoglobin is encoded by the nucleotide sequence as set forth in SEQ ID NO: 5.

53. (Previously presented) The method of claim 45, wherein the transformed plant is a monocotyledonous crop plant.

/Brendan O. Baggot / 3/3/08

54. (Currently amended) ~~The monocotyledonous crop plant according to claim 53,~~
~~characterized in that it~~ The method of claim 45, wherein the transformed plant is a *Gramineae* species.

55. (Previously presented) The method of claim 45, wherein the transformed plant is a dicotyledonous crop plant.

56. (Currently amended) ~~The dicotyledonous crop plant according to claim 55, characterized in that it~~ The method of claim 45, wherein the transformed plant is a *Asteraceae, Brassicaceae, Compositae, Cruciferae, Cucurbitaceae, Leguminosae, Rubiaceae, Solanaceae, Sterculiaceae, Theaceae or Umbelliferae* species.

57. (Currently amended) ~~The dicotyledonous crop plant according to claim 55, characterized in that the~~ The method of claim 45, wherein the transformed plant is selected from the group consisting of *Borago officinalis* (borage), *Brassica campestris*, *Brassica napus*, *Brassica rapa* (mustard or oilseed rape), *Cannabis sativa* (hemp), *Carthamus tinctorius* (safflower), *Cocos nucifera* (coconut), *Crambe abyssinica* (crambe), *Cuphea* species, *Elaeis guinensis* (African oil palm), *Elaeis oleifera* (American oil palm), *Glycine max* (soybean), *Gossypium hirsutum* (American cotton), *Gossypium barbadense* (Egyptian cotton), *Gossypium herbaceum* (Asian cotton), *Helianthus annuus* (sunflower), *Linum usitatissimum* (linseed or flax), *Oenothera biennis* (evening primrose), *Olea europaea* (olive), *Oryza sativa* (rice), *Ricinus communis* (castor-oil plant), *Sesamum indicum* (sesame), *Triticum* species (wheat), *Zea mays* (maize), walnut and almond.

58. (Previously presented) The method of claim 45, wherein the transformed plant is potato, *Arabidopsis thaliana*, soybean or oilseed rape.